WHAT IS CLAIMED IS:

1. An illumination device, comprising:

a waveguide having a peripheral portion;

a series of point light sources mounted in spaced relationship adjacent the peripheral portion of the waveguide;

a series of diffusive reflective surfaces adjacent the peripheral portion of the waveguide and between pairs of said point light sources, the diffusive reflective surfaces oriented relative to the series of point light sources and the waveguide so as to introduce light in regions of said waveguide between pairs of said point light sources whereby the peripheral portion of the waveguide is substantially uniformly illuminated.

2. The device of Claim 1, wherein the diffusive reflective surfaces comprise a series of posts mounted in a spaced relationship adjacent the peripheral portion of the waveguide.

3. The device of Claim 2, wherein each of the posts have a triangular cross-section.

4. The device of Claim 1, wherein the diffusive reflective surfaces are oriented at an angle of approximately 45° relative to the peripheral portion of the waveguide.

5. The device of Claim 1, wherein the series of point light sources comprise light-emitting diodes mounted on an electrical-conductive strip of material.

6. The device of Claim 1, additionally comprising a heat sink coupled to the series of point light sources.

7. The device of Claim 1, wherein the waveguide comprises a top surface having an optical output area through which light exits the waveguide.

8. The device of Claim 7, additionally comprising an angular spectrum restrictor proximate the top surface of the waveguide to enhance the brightness of the light exiting the waveguide.

9. The device of Claim 8, additionally comprising a diffuser between the angular spectrum restrictor and the top surface of the waveguide.

10. The device of Claim 9, wherein the diffuser comprises a series of scratches arranged in a non-uniform pattern on the top surface of the waveguide.

11. The device of Claim 1, wherein the diffusive reflective surfaces have a reflectivity of at least approximately 90%.

12. An illumination device, comprising:

a series of diffusive reflective optical cavities formed by diffusive reflective surfaces, each of said cavities having an entry mouth sized to receive a point light source and an exit mouth;

a point light source mounted at each of the entry mouths;

a pair of surfaces forming a waveguide, said waveguide having a peripheral portion extending along the exit mouths of said diffusive reflective optical cavities.

13. The device of Claim 12, wherein the diffusive reflective surfaces comprise posts mounted adjacent the peripheral edge of the waveguide.

14. The device of Claim 13, wherein the posts have a triangular-shaped cross-section.

15. The device of Claim 12, additionally comprising a heat sink coupled to the point light sources.

16. The device of Claim 12, wherein each of the optical cavities are funnel-shaped such that the exit mouth is larger than the entry mouth.

17. An illumination device, comprising:

an optical cavity having an output aperture;

a series of diffusive reflective optical cavities each substantially smaller than said optical cavity and having an exit mouth disposed along a side of said optical cavity;

a series of point sources of light mounted to emit light into said series of diffusive reflective optical cavities, respectively, whereby light is injected from said exit mouths into a peripheral portion of said optical cavity.

18. The device of Claim 17, wherein said optical cavity comprises a waveguide.

19. The device of Claim 18, wherein said series of diffusive reflective optical cavities are formed by a series of posts disposed in a side-by-side relationship along said side of said optical cavity.

20. The device of Clam 17, wherein the point sources of light comprise light-emitting diodes.

21. An illumination device, comprising:

an optical cavity formed by diffusive reflective surfaces, said cavity having an output region through which light exits said cavity;

a plurality of guide members formed by diffusive reflective surfaces, the guide members positioned along a periphery of the optical cavity such that spaces are defined between each of the guide members, each of the spaces having an entry mouth spaced from the periphery of the optical cavity and an exit mouth wider than the entry mouth and adjacent the periphery of the optical cavity; and

a light source mounted at the entry mouths of each of the spaces between the guide members.

22. The device of Claim 21, additionally comprising an angular spectrum restrictor proximate the output region of the optical cavity.

23. The device of Claim 22, additionally comprising a diffuser adjacent the angular spectrum restrictor.

24. The device of Claim 21, wherein each of the guide members have a triangular cross-section.

25. The device of Claim 21, wherein the guide members comprise a set of diffusive reflective surfaces disposed at an angle of approximately 45° relative to a peripheral edge of the waveguide.

26. A method of illuminating a waveguide, comprising:

confining light emitted by a first point light source by using diffusive reflective surfaces to reflect the light;

repeating said confining for additional point light sources;

spatially arranging all of the confined light to substantially uniformly illuminate a peripheral portion of said waveguide.

27. The method of Claim 26, additionally comprising coupling a heat sink to the point light sources to absorb heat therefrom.

28. The method of Claim 26, additionally comprising orienting the diffusive reflective surfaces at an angle of approximately 45° relative to the edge of the waveguide.

29. The method of Claim 26, additionally comprising mounting the point light sources in a side-by-side, spaced relationship along the peripheral portion of the waveguide.